

To: State of Michigan

From: Rebecca Stanfield, Senior Energy Policy Advocate, NRDC Midwest Program

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Q3. What are the total dollar amounts of investment and savings achieved to date, and what levels are expected to be achieved when the 2012 energy savings goals are reached for natural gas and electricity? Will the 2012 energy optimization standard continue to be achieved through 2015 and beyond?

Investment to Date: The table below displays the actual amounts invested in energy efficiency over the last three years by Michigan utilities. As you can see, roughly 90 percent of this investment was made by Consumers Energy, Detroit Edison and MichCon, while about 10 percent of the investment was made by the municipal utilities, cooperatives and smaller investor owned utilities.¹

Table Q3-1: Michigan Utility Energy Efficiency Investment (\$millions)				
	2009	2010	2011	total
Consumers Energy	38	57	97	192
Detroit Edison	20	41	56	117
MichCon	6	16	26	48
Other IOUs	0	12	15	27
Munis	3	5	8	16
Coops	0	4	4	8
Total investment	67	132	202	400
Lifecycle value of benefits (\$ millions)		544	709	More than \$1.2 billion

¹, 2012 Report on the Implementation of P.S. 295 Energy Optimization Programs, November 30, 2012, appendix D-3).

Savings to Date: The table Q3-2 below shows the **first year** savings results for gas and electric utilities from 2009-2011.² This means that these are the amounts by which the measures installed in a given year will reduce energy consumption **in that year**. Clearly, the savings for each measure installed will continue for years into the future, so the amounts shown in the table are a fraction of the total savings produced by the measures installed that year.

Because compliance with the targets is measured based on first-year savings, the plans and annual reports focus primarily on the first year savings achieved for each program and the portfolio as a whole.

However, the actual value of the program is reflected in the lifecycle savings and the value of that savings over the life of the measures. While we were not able to find the lifetime savings estimates for all of the Michigan utilities, Consumers Energy did provide their estimates of the lifetime savings from each of the first three years of program. Those are presented in Table Q3-3 below. As you can see in the chart below, the full lifetime savings was 10.4 times higher than the first-year savings for electricity, and nearly 12 times higher than the first year savings for gas programs.

The Michigan PSC has therefore reported, based on data submitted by Detroit Edison and Consumers Energy, that the lifecycle benefits (cost savings) resulting from the measures installed in 2011 alone will be \$709 million, which is 3.4 times the amount of the investment in that year.³ Similarly, the Commission reported that for the 2010 program year, the value of the savings was \$544 million, which was 4.9 times the cost of the savings to ratepayers. Put another way, for every dollar spent on energy optimization in 2010 and 2011, ratepayers realize savings of \$3.4 to \$4.9 dollars.

Table Q3-2 Michigan Utility Energy Optimization Results to Date (first year)		
	2009-2011 MWh	2009-2011 MCF
Consumers Energy	749,311	3,374,307
Detroit Edison	1,124,995	
MichCon		2,406,680
Other IOUs	119,159	812,730

² Id at appendix C-1 and C-2.

³ Id at p. 9.

Munis	126,501	
Coops	44,193	
	2,164,159	6,593,717

Table Q3-3: Consumers Energy - EE Programs Life-cycle Savings						
	2009		2010		2011	
	MWh	Mcf	MWh	Mcf	MWh	Mcf
Residential	281,076	3,086,476	869,612	6,581,879	1,419,749	9,477,293
Business	1,146,515	4,034,697	1,824,527	5,003,150	2,329,259	12,340,434
Total	1,427,591	7,121,173	2,694,139	11,585,029	3,749,008	21,817,727

Projected Investment and Savings for 2012-2015: In 2012-2015, Consumers Energy will invest on average about \$117 million per year in its electric and gas energy optimization programs, according to its approved plan.⁴ The Company expects that, on a lifecycle basis, its programs will deliver savings at 2 cents per kWh for electricity, and \$1.76 per MCF of natural gas, substantially less than the cost of providing this power from a new gas or coal plant, and less than the cost of natural gas deliveries for Michigan residential customers (see answers to Question #4 for more detailed comparisons of the cost of conserved energy versus the cost of generating power and delivering natural gas to residents).

In 2012-2015, DTE/MichCon will invest on average \$106 million per year in its electric and gas energy optimization programs, according to its approved plan.⁵ Detroit Edison estimates that for its electricity programs, the total value of the saved energy to customers over the lifetime of programs from 2009 thru 2015 will be \$4.5 billion, compared to total costs (2009-2015) of \$600 million.⁶ DTE projects that its average cost of conserved energy will be 1 cent per kwh for its electric portfolio, and \$1.5 per MCF for its gas programs. Again, this compares favorably to the cost of generation from new gas or coal plants, and is even quite competitive with the cost of current power plants and the cost of delivered natural gas.

⁴ U-16670, Exhibit A-17 (TAY-3).

⁵ U-17049, Exhibit A-4, VM Campbell and U-15806 EO-Amended, Exhibit A-2, RG Ingrody; U-17050, Exhibit A04, VM Campbell and U-15890-A, Exhibit A-2, RG Ingrody.

⁶ U-16737, Exhibit A-7, VM Campbell.

Below are the projected **first year** savings amounts for Consumers Energy, Detroit Edison and MichCon in 2012-2015. This means that these are the amounts that the measures installed in a given year will reduce energy consumption in that year. Consumers will exceed the minimum statutory target by 20 percent for electricity and by 6 percent for gas programs on average across the four-year plan term, and will do so while spending less than allowed under the statutory cap on recovery of energy optimization program costs. DTE and Mich/Con also expect to exceed the standard within the cap on program cost recovery.

Table Q3-4: Consumers Energy Planned Savings, 2012-2015			
	Electric (000 MWh)	Gas (million MCF)	
2012		383.2	2.176
2013		407.7	2.188
2014		409.6	2.076
2015		424.9	2.042

Table Q3-5: Detroit Edison/MichCon			
	Electric (000 MWh)	Gas (million MCF)	
2012		625.9	1.38
2013		519.1	1.35
2014		533.6	1.30
2015		541.4	1.26